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| **Module 2 Review Exercise** |
| 1. How long would PAUSE 1000 last?   \_\_ **1 second** |
| 1. What program code would you use to cause the BASIC Stamp to do nothing for an entire minute?   \_\_ **PAUSE 60000** |
| 1. What are the different types of variables used by BASIC Stamp?   **BIT,**  **NIB,**  **BYTE**  **WORD** |
| 1. Can a byte hold the value 500?   **No, A byte can hold up to the value 255. The value 500 is out of range.** |
| 1. What will the command HIGH 7 do?   **HIGH 7 will cause the BASIC STAMP to internally connect I/O pin P7 to Vdd.** |

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| 1. Refer to the figure below and answer the following questions: | |
|  | **‘{$STAMP BS2}**  **‘{$PBASIC 2.5}**  DEBUG“The LED is blinking”  DO  HIGH 14  PAUSE 500  LOW 14  PAUSE 500  LOOP  END |
| 1. Draw the schematic diagram for the LED circuit.      1. Modify the LedOnOff.bs2 program to make the LED flash ON and OFF four times in one second. | |
| **{$STAMP BS2}**  **‘{$PBASIC 2.5}**  DEBUG “The LED is blinking”  DO  HIGH 14  PAUSE 125  LOW 14  PAUSE 125  LOOP  END  c. Rewrite the program to make the LED circuit flash ON and OFF 500 times before it stops. | |
| 1. What happens between the terminals of a normally open pushbutton when you press it?   **When pressed, the gap between the terminals is bridged by a conductive metal.**  **Current can then flow through the pushbutton.** | |
| 1. What is the value of IN3 when a pushbutton connects it to Vss?   **IN3 = 0 when pushbutton connects it to Vss.** | |
| 1. What does the command DEBUG ? IN3 do?   **DEBUG ? IN3 displays the text “IN3 = ” followed by the value stored in IN3**  **(either a 0 or 1 depending on the state of I/O pin P3) .**   1. Write a BS2 program to read the state of the pushbutton in the circuit shown below: | |

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| **2.11 Assignment** |
| Make a 10-second countdown using one yellow LED and one bi-color LED. Make the bi-color LED start out red for 3 seconds. After 3 seconds, change the bi-color LED to green. When the bi-color LED changes to green, flash the yellow LED ON and OFF every second for 10 seconds. The program must repeat forever till the reset button is pressed or until the power to the BASIC Stamp is switched OFF.  ' {$STAMP BS2}  ' {$PBASIC 2.5}  DEBUG " YELLOW AND BI LED FLASH"  COUNTER VAR BYTE  HIGH 14  HERE RED COLOR ON  LOW 15  PAUSE 3000  LOW 14  HERE GREEN COLOR ON  HIGH 15  FOR COUNTER = 1 TO 10  HIGH 13  YELLOW LED ON AND FLASHES 10 TIMES  PAUSE 500  LOW 13  PAUSE 500  NEXT  HERE RED LED STAYS ON  LOW 15  HIGH 14  END |